RESPONSE FROM DOUG MAHONE TO KARL GUTTMAN via email 6/27/02 2005 STANDARDS

>>> "Douglas Mahone" <dmahone@h-m-g.com> 06/27/02 10:49AM >>> Karl -

This is in response to your comment (one of several) submitted to the CEC about our Time Dependent Valuation proposal. You commented:

3. Time of Day Valuation: We understand the reasoning behind this proposed change, but are somewhat concerned about instability at the time of change from off-peak to on-peak and vice versa, resulting in loss of temperature control and/or increased demand charges.

Because of the way TDV will be implemented, I don't believe it will cause the kinds of problems to which you allude. TDV does not actually model a utility rate with demand charges, as is traditionally done in simulations to predict utility costs. Under TDV, the Title 24 performance simulations will be done as per usual. The user will describe the as-designed building, the compliance tool will automatically generate a standard design for comparison purposes, and both will be run. The hourly gas and electricity consumption for each of the designs will be generated from those runs, and the sum of hourly deltas between them will represent the energy savings. Then, for each hour, the energy savings will be multiplied by a pre-calculated TDV value. That value has been derived to account for the costs of generation, transmission, distribution, fixed costs, etc. It is not, however, applied to anything other than the calculated energy savings value (not estimated demand, for example). The sum of the 8760 hourly TDV savings values represent the annual TDV energy - if it's greater than one, then the as-designed building saves energy relative to the standard design and the building complies with Title 24.

So, because of the way this is done, I don't see how there could be instabilities or excessive demand charges. I hope this answers your concern. Thanks for raising it... I hadn't actually considered that possibility before.

Call me or Jon McHugh at my office if you'd like to discuss this further.

Comment from Karl Guttmann Via Email to Bill Pennington at the California Energy Commission

SUBJECT: Proposed changes to Title 24 Energy Standards

We would like you to consider the following comments in connection with some of the proposed changes:

- 1 Water cooled chillers over 200 TR should not be required for ice or chilled water storage systems or any systems where the chiller is operated primarily during off-peak hours (may require definition of "primarily"). There should also be exceptions allowed if water is in short suppkly (desert areas). Is this change meant to apply to plant capacity or unit capacity? E.g., if you have a 300 TR plant, can you use two air cooled 150 TR chillers?
- 2. Duct insulation at R-4 should be allowed if to ti < 20 degrees (or some such figure).
- 3. Time of Day Valuation: We understand the reasoning behind this proposed change, but are somewhat concerned about instability at the time of change from off-peak to on-peak and vice versa, resulting in loss of temperature control and/or increased demand charges.
- 4. Highly reflective roofs, if they represent very large areas (may need definition of "very large"), can represent a hazard to aviation because they could temporally blind pilots.
- > Karl Guttmann
 > Principal
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